# REMARKS

<u>Rejection of claims 1-19 under 35 U.S.C. §103(a) as being unpatentable over Bale in view of Kumar</u>

The Examiner rejected claims 1-19 under 35 U.S.C. §103(a) as being unpatentable over Bale in view of Kumar.

<u>Claim 1</u>

In rejecting claim 1, the Examiner states that Bale teaches:

> an object oriented class replacement mechanism residing in the memory and executed by the at least one processor that generates an instance of a selected class to access the appropriate entry in the class configuration data (col. 1, lines 60-67, col. 2, lines 1-49 and col. 7 lines 10-67).

Applicant readily admits that Bales teaches an object oriented class substitution mechanism that generates an instance of a selected class. However, the language of the Examiner reproduced above shows that the Examiner has misunderstood the claim limitations. The applicable clause in claim 1 recites:

> an object oriented class replacement mechanism residing in the memory and executed by the at least one processor that generates an instance of a selected class by using a key that includes context information to access the appropriate entry in the class configuration data.

This claim language makes it clear that the object oriented class replacement mechanism uses a key that includes context information to access the appropriate entry in the class configuration data to generate an instance of a selected class. The Examiner's language in the rejection states: "generates an instance of a selected class to access the appropriate entry in the class configuration data." The Examiner has thus omitted the key with

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context information, but has incorrectly included the phrase "to access the appropriate entry in the class configuration data" as a function of the instance. Claim 1 does not recite the generation of an instance to access an appropriate entry in the class configuration data, as stated by the Examiner. To the contrary, claim 1 recites a key that includes context information that is used to access the appropriate entry in the class configuration data in the generation of a selected instance. Because the Examiner has mischaracterized the limitations in claim 1, the Examiner has failed to establish a prima facie case of obviousness for claim 1 under 35 U.S.C. §103(a) based on the combination of Bale and Kumar.

The Examiner further states in the rejection:

> Bale does not explicitly indicate "each class configuration entry including a key-value pair, wherein the key includes information relating to a selected processing context and the value includes configuration data for a class in the selected processing context and by using a key that includes context information."
>
> However, Kumar discloses key-value pair and a selected processing context as claimed (col. 7, lines 4-18, col. 14, lines 28-42 and col. 19, lines 22-34; col. 7, lines 1-3, col. 16 lines 20-30, col. 17, lines 64-67 and col. 18, lines 1-18).

Applicant respectfully asserts that the Examiner's contention that Kumar discloses a key-value pair and a selected processing context as claimed is incorrect. The applicable portion of claim 1 states:

> class configuration data comprising a plurality of entries residing in the memory, each class configuration entry including a key-value pair, wherein the key includes information relating to a selected processing context and the value includes configuration data for a class in the selected processing context;

Applicant readily admits that Kumar teaches key-value pairs, and that Kumar teaches different processing contexts. However, these concepts are not related. Claim 1 recites a

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key-value pair wherein the key includes information relating to a selected processing context and the value includes configuration data for a class in the selected processing context. While Kumar teaches key-value pairs and different processing contexts, it does not teach a key value pair "wherein the key includes information relating to a selected processing context and the value includes configuration data for a class in the selected processing context", as clearly recited in claim 1.

## The Keys in Kumar Do Not Include Information Relating to a Selected Processing Context

Key-value pairs are discussed in Kumar as attributes of objects or classes. An example of attributes in Kumar is shown in FIG. 4. Item 401 in FIG. 4 is described as an attribute. Item 401 is the statement "name=John T. Roth". This attribute is a key-value pair, with "name" being the key and "John T. Roth" being the value. Many other attributes are shown in FIG. 4, with each comprising a label as the key and a specified value. In FIG. 4 of Kumar, the keys are labels that do not include information relating to a selected processing context. While Kumar does teach different processing contexts, it does not teach that the keys in key-value pairs include information relating to a selected processing context. Because the keys in Kumar do not include information relating to a selected processing context, as recited in claim 1, the key-value pairs in Kumar do not read on the key-value pair recited in claim 1.

## The Values in Kumar Do Not Include Configuration Data for a Class in the Selected Processing Context

Going back to the example in FIG. 4 of Kumar, the value "John T. Roth" for the attribute 401 does not include configuration data for a class in a selected processing context, as expressly recited in claim 1. While Kumar does teach different processing contexts, it does not teach that the values in key-value pairs include configuration data

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for a class in a selected processing context. The Examiner cited Bale as allegedly teaching class configuration data comprising a plurality of entries. Kumar has no teaching whatsoever that reads on configuration data for a class in a selected processing context. As a result, the values in the key-value pairs in Kumar cannot include configuration data for a class in a selected processing context, as recited in claim 1.

The values of the key-value pairs in Kumar are expressly limited. Col. 14 lines 31-35 states:

> The value associated with a given key may be either a primitive value (e.g., a numeric value, string value, logical value, and the like) as illustrated at 401, another profile as illustrated at 413, or an external data store reference as shown at 402.

The values in the key-value pairs in Kumar are limited to the three listed categories, namely: 1) primitive value; 2) another profile; and 3) external data store reference. Because Kumar by its own terms limits the values of its key-value pairs to these three categories, and because none of these categories include configuration data for a class in a selected processing context, Kumar expressly teaches away from the key-value pair of claim 1 that has a value that includes configuration data for a class in a selected processing context.

Because the keys in Kumar do not include information relating to a selected processing context, and because the values in Kumar do not include configuration data for a class in the selected processing context, the key-value pairs in Kumar do not read on the key-value pair in claim 1. For these reasons, claim 1 is allowable over the combination of Bale and Kumar, and applicant respectfully requests reconsideration of the Examiner's rejection of claim 1.

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## Combination of Bale and Kumar does not teach all limitations in claim 1

Bale teaches class replacement. Kumar teaches key-value pairs for object attributes, and teaches the unrelated concept of different processing contexts. Combining Bale and Kumar would result in the class configuration data of Bale, and key-value pairs that represent class attributes. The result of combining Bale with Kumar is the class replacement system of Bale with class attributes as taught by Kumar. This does not read on the limitations in claim 1, which include:

> class configuration data comprising a plurality of entries residing in the memory, each class configuration entry including a key-value pair, wherein the key includes information relating to a selected processing context and the value includes configuration data for a class in the selected processing context;
>
> an object oriented class replacement mechanism residing in the memory and executed by the at least one processor that generates an instance of a selected class by using a key that includes context information to access the appropriate entry in the class configuration data.

A reasonable combination of Bale and Kumar still does not teach class configuration data that includes a key-value pair for each entry, wherein the key includes information relating to a selected processing context and the value includes configuration data for a class in the selected processing context. As stated above, the keys in Kumar do not include context information, and the values in Kumar do not include configuration data for a class in the selected processing context. Furthermore, a reasonable combination of Bale and Kumar does not teach a class replacement mechanism that generates an instance of a selected class by using a key that includes context information to access the appropriate entry in the class configuration data, as recited in claim 1. In Bale, class replacement is done by changing pointers to point to a new class. For this reason, Bale teaches away from performing class replacement in the manner recited in claim 1. For these many reasons, the combination of Bale and Kumar cited by the Examiner do not

teach all limitations in claim 1, and applicant respectfully requests reconsideration of the Examiner's rejection of claim 1 under 35 U.S.C. §103(a).

Summary for Claim 1

As stated in the preceding paragraphs, the key-value pairs in Kumar do not read on the key-value pair in claim 1, and the combination of Bale and Kumar do not teach all limitations in claim 1. For these reasons, claim 1 is allowable over the combination of Bale and Kumar, and applicant respectfully requests reconsideration of the Examiner's rejection of claim 1 under 35 U.S.C. §103(a).

Claims 2 and 3

In rejecting claims 2 and 3, the Examiner states:

> Bale does not explicitly indicate "wherein the key comprises context information appended to a class identifier; and wherein the class identifier comprises a class token that comprises a text string."
>
> However, Kumar discloses class identifier and string as claimed (abstract, col. 5 lines 10-32, col. 7, lines 54-57, col. 14, lines 28-42, and col. 19, lines 10-67).

Applicant respectfully asserts that the Examiner has failed to establish a prima facie case of obviousness for claims 2 and 3, because the Examiner has failed to address all limitations in these claims. Claim 2 recites:

> 2. The apparatus of claim 1 wherein the key comprises context information appended to a class identifier.

The Examiner has failed to address the limitation of a key that comprises context information appended to a class identifier. For this reason, the Examiner has failed to establish a prima facie case of obviousness for claim 2 under 35 U.S.C. §103(a).

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Kumar does teach class identifiers. However, Kumar does not teach a key that comprises context information appended to a class identifier, as recited in claim 2. Nowhere does Kumar teach context information appended to a class identifier. For this reason, claim 2 is clearly allowable over the combination of Bale and Kumar. In addition, claim 2 depends on claim 1, which is allowable for the reasons given above. As a result, claim 2 is also allowable as depending on an allowable independent claim. Applicant respectfully requests reconsideration of the Examiner's rejection of claim 2 under 35 U.S.C. §103(a).

Claim 3 depends on claim 2, and further specifies that the class identifier comprises a class token that comprises a text string. When read with the limitations in claim 2, claim 3 recites a key that comprises context information appended to a class token that comprises a text string. The language of Kumar cited by the Examiner does not teach or support a key that comprises context information appended to a class token that comprises a text string, as recited in claim 3. For this reason, claim 3 is allowable over the combination of Bale and Kumar. In addition, claim 3 depends on claim 2, which depends on claim 1, which is allowable for the reasons given above. As a result, claim 3 is also allowable as depending on an allowable independent claim. Applicant respectfully requests reconsideration of the Examiner's rejection of claims 2 and 3 under 35 U.S.C. §103(a).

Claim 4

Claim 4 recites:

4. The apparatus of claim 1 further comprising a factory object that generates an instance of the selected class by accessing the appropriate entry in the class configuration data using the key.

In rejecting claim 4, the Examiner states that Bale discloses the limitations in claim 4. Without delving into the teachings of Bale, we can determine that this rejection is not sound. Claim 4 recites the generation of an instance of a selecting class by <u>using the key</u> to access the appropriate entry in the class configuration data. The Examiner admitted in the rejection of claim 1 that Bale does not teach a key, and relied upon Kumar as allegedly teaching the key-value pair in claim 1. Because Bale does not teach the key-value pair, it is impossible for Bale to teach the limitations in claim 4, which include the generation of an instance of the selected class by accessing the appropriate entry in the class configuration data <u>using the key</u>.

In Bale, class replacement is performed by changing class pointers. By changing a class pointer to point to a new class, the system in Bale knows to generate an instance of the new class instead of generating an instance of the old class. Applicant respectfully asserts that changing a pointer as taught in Bale expressly teaches away from accessing the appropriate entry in class configuration data using the key, as recited in claim 4. These are two different and distinct manners to perform class substitution. Because Bale teaches away from using a key as recited in claim 4, claim 4 is allowable over the combination of Bale and Kumar. In addition, claim 4 depends on claim 1, which is allowable for the reasons given above. As a result, claim 4 is also allowable as depending on an allowable independent claim. Applicant respectfully requests reconsideration of the Examiner's rejection of claim 4 under 35 U.S.C. §103(a).

## Claim 5

Claim 5 recites a key generator mechanism that generates the key from a class identifier and from the context information. The rejection of claim 5 only addresses "the context information." Because the Examiner has not addressed the key generator mechanism in claim 5, the Examiner has failed to establish a prima facie case of obviousness for claim 5 under 35 U.S.C. §103(a).

The cited language in Kumar at col. 19 lines 22-34 relates to the defineExternalDatastore method (see preceding paragraph in Kumar). A careful reading of the cited language shows that the defineExternalDatastore method accepts: 1) other properties represented as a hashtable representing key-value pairs; 2) parameters specifying cache rules; and 3) parameters indicating a client context. Note that the key-value pairs and client context are different things that the defineExternalDatastore method may accept. The key-value pairs and client context are otherwise completely unrelated.

The keys in Kumar are text labels, as shown by the attribute 401 "name=John T. Roth" in FIG. 4 of Kumar. Nowhere does Kumar teach a key generator mechanism of any kind. Furthermore, nowhere does Kumar teach the generation of a key from a class identifier and from the context information as recited in claim 5. Because Kumar does not teach the key generator mechanism as recited in claim 5, claim 5 is allowable over the combination of Bale and Kumar. In addition, claim 5 depends on claim 1, which is allowable for the reasons given above. As a result, claim 5 is also allowable as depending on an allowable independent claim. Applicant respectfully requests reconsideration of the Examiner's rejection of claim 5 under 35 U.S.C. §103(a).

Claims 6, 12 and 13

The remaining independent claims, claims 6, 12 and 13, all recite a key that includes information relating to a selected processing context. As stated above for claim 1, neither Bale nor Kumar teach a key that includes information relating to a selected processing context. For this reason, and for other reasons given above for claim 1, claims 6, 12 and 13 are also allowable, and applicant respectfully requests reconsideration of the Examiner's rejection of claims 6, 12 and 13 under 35 U.S.C. §103(a).

Claims 7-11

     In rejecting claims 7-11, the Examiner states:

> With respect to claims 7-11, Bale discloses a method as discussed in claim 6 and also Bale disclose storing the configuration data. . . .

> Bale does not explicitly indicate "the corresponding key comprises the step of generating a key from a class identifier and from the context information; wherein the key comprises context information appended to a class identifier; wherein the class identifier comprises a class token that comprises a text string; and generating the key from a class identifier from the context information.

> However, Kumar disclosed the context as claimed . . .; class identifier and string as claimed . . .

Each of claims 7-11 are addressed below.

Claim 7

     In rejecting claims 7-11, the Examiner states "Bale discloses a method as discussed in claim 6 and also Bale disclose storing configuration data." Note, however, that claim 7 recites the step of "storing the configuration data <u>with the corresponding key</u>." Because the Examiner has not addressed the limitation of storing the configuration data with the corresponding key as recited in claim 7, the Examiner has failed to establish a prima facie case of obviousness for claim 7 under 35 U.S.C. §103(a).

     While Kumar does teach key-value pairs, Kumar does not teach a key that includes information relating to the selected processing context, so the key in Kumar does not read on the key in claim 7. For this reason, the step of storing the configuration data in Bale with a key that includes information relating to the selected processing context would not have been obvious in light of the teachings of Kumar. For this reason, claim 7

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is allowable over the combination of Bale and Kumar. In addition, claim 7 depends on claim 6, which is allowable for the reasons given above. As a result, claim 7 is also allowable as depending on an allowable independent claim. Applicant respectfully requests reconsideration of the Examiner's rejection of claim 7 under 35 U.S.C. §103(a).

Claim 8

Claim 8 recites the step of generating a key from a class identifier and from the context information. The Examiner has not addressed this step in the rejection of claims 7-11, and has therefore failed to establish a prima facie case of obviousness for claim 8 under 35 U.S.C. §103(a).

Kumar does teach a class identifier, and does teach different processing contexts, but Kumar does not teach a key that includes context information. Furthermore, Kumar does not teach any step of key generation at all. For these reasons, claim 8 is allowable over the combination of Bale and Kumar. In addition, claim 8 depends on claim 7, which depends on claim 6, which is allowable for the reasons given above. As a result, claim 8 is also allowable as depending on an allowable independent claim. Applicant respectfully requests reconsideration of the Examiner's rejection of claim 8 under 35 U.S.C. §103(a).

Claim 9

Claim 9 recites that the key comprises context information appended to a class identifier. The Examiner has not addressed the limitations of context information appended to a class identifier. For this reason, the Examiner has failed to establish a prima facie case of obviousness for claim 9 under 35 U.S.C. §103(a). While Kumar teaches class identifiers and teaches different processing contexts, Kumar does not teach a key that includes context information. Furthermore, Kumar does not teach a key that comprises context information appended to a class identifier. For these reasons, claim 9

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is allowable over the combination of Bale and Kumar. In addition, claim 9 depends on claim 6, which is allowable for the reasons given above. As a result, claim 9 is also allowable as depending on an allowable independent claim. Applicant respectfully requests reconsideration of the Examiner's rejection of claim 9 under 35 U.S.C. §103(a).

Claim 10

Claim 10 depends on claim 9, and further specifies that the class identifier comprises a class token that comprises a text string. When read with the limitations in claim 9, claim 10 recites a key that comprises context information appended to a class token that comprises a text string. The Examiner has not addressed the limitation of context information appended to a class token that comprises a text string in the rejection of claims 7-11, and has therefore failed to establish a prima facie case of obviousness for claim 10 under 35 U.S.C. §103(a).

The language of Kumar cited by the Examiner does not teach or support a key that comprises context information appended to a class token that comprises a text string, as recited in claim 10. For this reason, claim 10 is allowable over the combination of Bale and Kumar. In addition, claim 10 depends on claim 9, which depends on claim 6, which is allowable for the reasons given above. As a result, claim 10 is also allowable as depending on an allowable independent claim. Applicant respectfully requests reconsideration of the Examiner's rejection of claim 10 under 35 U.S.C. §103(a).

Claim 11

Claim 11 recites the step of "generating the key from a class identifier and from the context information." The rejection of claims 7-11 only addresses "the context information", and does not address the generation of a key. Because the Examiner has not addressed the step of generating the key as recited in claim 11, the Examiner has

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failed to establish a prima facie case of obviousness for claim 11 under 35 U.S.C. §103(a).

The keys in Kumar are text labels, as shown by the attribute 401 "name=John T. Roth" in FIG. 4 of Kumar. Nowhere does Kumar teach the step of generating keys. Furthermore, nowhere does Kumar teach the generation of a key from a class identifier and from the context information as recited in claim 11. Because Kumar does not teach the step of generating a key as recited in claim 11, claim 11 is allowable over the combination of Bale and Kumar. In addition, claim 11 depends on claim 6, which is allowable for the reasons given above. As a result, claim 11 is also allowable as depending on an allowable independent claim. Applicant respectfully requests reconsideration of the Examiner's rejection of claim 11 under 35 U.S.C. §103(a).

## Claims 14 and 15

Each of claims 14 and 15 depend on claim 13, which is allowable for the reasons given above. As a result, claims 14 and 15 are allowable as depending on an allowable independent claim, and applicant respectfully requests reconsideration of the Examiner's rejection of claims 14 and 15 under 35 U.S.C. §103(a).

## Claims 16-17

Claims 16-17 were rejected based on the rejection of claims 2-3. Claims 16-17 are allowable for the same reasons given above with respect to claims 2-3. In addition, claims 16-17 depend on claim 13, which is allowable for the reasons given above. As a result, claims 16-17 are also allowable as depending on an allowable independent claim. Applicant respectfully requests reconsideration of the Examiner's rejection of claims 16-17 under 35 U.S.C. §103(a).

## Claim 18

Claim 18 was rejected based on the rejection of claim 4. Claim 18 is allowable for the same reasons given above with respect to claim 4. In addition, claim 18 depends on claim 13, which is allowable for the reasons given above. As a result, claim 18 is also allowable as depending on an allowable independent claim. Applicant respectfully requests reconsideration of the Examiner's rejection of claim 18 under 35 U.S.C. §103(a).
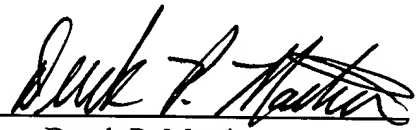
## Claim 19

Claim 19 was rejected based on the rejection of claim 5. Claim 19 is allowable for the same reasons given above with respect to claim 5. In addition, claim 19 depends on claim 13, which is allowable for the reasons given above. As a result, claim 19 is also allowable as depending on an allowable independent claim. Applicant respectfully requests reconsideration of the Examiner's rejection of claim 19 under 35 U.S.C. §103(a).

## Conclusion

In summary, none of the cited prior art, either alone or in combination, teach, support, or suggest the unique combination of features in applicant's claims presently on file. Therefore, applicant respectfully asserts that all of applicant's claims are allowable. Such allowance at an early date is respectfully requested. The Examiner is invited to telephone the undersigned if this would in any way advance the prosecution of this case.

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